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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,272	01/17/2002	Yoshinori Hayashi	43780.014700	1306

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EXAMINER

PHAN, JAMES

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/053,272

Applicant(s)

HAYASHI, YOSHINORI

Examiner

James Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/11/03 has been entered.

#### ***Specification***

The disclosure is objected to because of the following informalities: the change in the specification in the amendment filed 4/18/03 is confusing because it is not clear whether "an imaging surface" in phrase "variation in a curvature of an imaging surface in each of the optical lens systems 14 and 18 respectively" is **a lens surface** on the image/scanned plane side. Alternatively, How could a curvature of an image is varied in each of the optical systems?

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-4 are indefinite in that "a variation in a curvature of an imaging surface of the second optical lens system is opposite to that in a curvature of an imaging surface of the third optical lens system" (claims 1-4, last paragraph) is not clear because

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the image/beam spot formed on the surface to be scan is formed by the third optical lens system. What does applicant mean by "curvature of an imaging surface"? Should "a variation in a curvature of an imaging surface of the second optical lens system is opposite to that in a curvature of an imaging surface of the third optical lens system" be changed to --a variation in a curvature of an image caused by the second optical lens system is opposite to that in a curvature of an image caused by the third optical lens system"--?

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-4, as understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Ishihara.

In re claims 1, 3 and 4 Ishihara discloses an image forming apparatus including an optical scanning apparatus (Fig. 3). The optical scanning apparatus including: a laser unit (12) includes a light source and inherently includes a first optical lens system (collimator lens) for coupling (collimating) the light flux emitted from the light source to a second optical lens system (cylindrical lens 13) (see Fig. 7); the second optical lens system (13) has power in a sub-scanning direction for forming the coupled/collimated light from the first optical lens system (collimator lens) into a line image extending in a main scanning direction perpendicular to the sub-scanning direction; an optical deflector (polygon mirror 16) having deflection reflection surface positioned at the linear image; and a third optical lens system (including imaging lenses 17 and 18) for forming an optical beam spot or a spot image on a surface to be scanned (19) . Wherein the second optical lens system (13) includes a glass lens (13a) and a plastic lens (13b) having a non-arc shape (cylindrical surface) and a negative power in the subscanning direction (Figs. 5 and 7). Ishihara further discloses that "imaging lens 18 is a plastic anamorphic lens having aspheric shape" (column 2, lines 49-50) and that "The cylindrical 13 ... has a temperature compensation function. With this function, even when the focal length of the imaging lens 18 has changed due to a change in temperature, the cylindrical lens 13 can prevent the spot image on the surface 19 to be scanned from deforming." (column 2, lines 51-57). Because plastic lenses (13b) and imaging lens (18) are sensitive to the temperature, the lens surfaces of the plastic lenses vary due to the change in temperature; and because the plastic lens (13b) has only a negative power in the sub-scanning direction, a variation in a curvature of the

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spot image on the surface (19) caused by the change in the plastic lens (13b) must be opposite to a variation in a curvature of the spot image on the surface (19) caused by the change in the plastic lens (18) so as to "prevent the spot image on the surface 19 to be scanned from deforming".


In re method claim 2 all the claimed method steps are inherently disclosed by Ishihara because the optical scanning apparatus disclosed in Ishihara has sufficient structure to carry out each of the claimed method steps.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Phan whose telephone number is (703) 308-4810. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (703) 305-0024. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Phan, J.  
July 28, 2003

  
James Phan  
Primary Examiner